

Emergency Rule
LSA Document #09-695(E)

DIGEST

Temporarily adds new provisions to address volatile organic compounds (VOC) reasonably available control technology (RACT) in Lake County and Porter County for process vents in batch operations. Authority: [IC 4-22-2-37.1\(a\)\(13\)](#). Effective September 3, 2009.

SECTION 1. Applicability. (a) This document applies to any source that has a batch process train associated with any of the SIC codes 2821, 2833, 2834, 2861, 2865, 2869, or 2879, and that meets the following criteria:

- (1) Is located in Lake County or Porter County.**
- (2) Has the potential to emit emissions of VOCs greater than or equal to one hundred (100) tons per year from all of the following:**
 - (A) Process vents from all batch operations.**
 - (B) All noncontrol technique guideline (non-CTG) emission units.**
 - (C) Unregulated emissions from CTG emission units, except emission units regulated under 40 CFR 60, Subpart BBB*; 40 CFR 60, Subpart III*; 40 CFR 60, Subpart NNN*; or 40 CFR 63, Subpart T*.**

(b) If a source meets the applicability requirements under subsection (a), but reduces its potential to emit for VOCs by means of federally enforceable operational restriction (for example, production, hours of operation, or capacity utilization) to less than one hundred (100) tons per year by April 1, 2011, the source is not subject to the requirements of SECTION 3 of this document.

(c) The owner or operator of a batch process train at a source that meets the applicability criteria of subsection (a) is subject to this document with the following exceptions:

- (1) Any source subject to control requirements in [326 IAC 8-5-3](#) is not subject to this document.**
- (2) The following unit operations within a batch process train and batch process trains are exempt from SECTION 3 of this document, control requirements, but are subject to SECTION 7 of this document, record keeping, and SECTION 8 of this document, reporting:**
 - (A) Any unit operation with uncontrolled total annual mass emissions of less than or equal to five hundred (500) pounds per year of VOC. Such unit operations are also excluded from the calculation of the total annual mass emissions for a batch process train. If the uncontrolled total annual mass emissions from such exempt unit operation exceed five hundred (500) pounds per year of VOC in any subsequent year, the owner or operator shall calculate and determine applicability in accordance with subsection (d) for both the individual unit operation and the batch process train containing the unit operation.**
 - (B) Any batch process train containing process vents that have, in the aggregate, uncontrolled total annual mass emissions, as determined in accordance with SECTION 4(a)(1) of this document, of less than thirty thousand (30,000) pounds per year of VOC for all products manufactured in such batch process train.**

(d) The applicability equations in subsection (e), which require the calculation of uncontrolled total annual mass emissions and flow rate value, shall be used to determine whether a unit operation or a batch process train is subject to the control requirements in SECTION 3 of this document. The applicability equations shall be applied to the following:

- (1) Any unit operation with uncontrolled total annual mass emissions that exceed five hundred (500) pounds per year and with a VOC concentration greater than five hundred (500) parts per million by volume (ppmv). In this individual determination, no applicability analysis shall be performed for any unit operation with a VOC concentration of less than or equal to five hundred (500) ppmv.**
- (2) Any batch process train containing process vents that, in the aggregate, have uncontrolled total annual mass emissions of thirty thousand (30,000) pounds per year or more of VOC from all products manufactured in the batch process train. Any unit operation with uncontrolled total annual mass emissions exceeding five hundred (500) pounds per year, regardless of VOC concentration, shall be included in the aggregate applicability analysis.**

(e) Applicability equations under this subsection are specific to volatility and are as follows:

- (1) Abbreviations are as follows:**

- (A) FR = calculated applicability flow rate, scfm.
 - (B) UTAME = uncontrolled total annual mass emissions of VOC, expressed as pounds per year.
 - (C) WAV = weighted average volatility.
 - (D) MVOC_i = mass of VOC component i.
 - (E) MWVOC_i = molecular weight of VOC component i.
 - (F) VP_i = vapor pressure of VOC component i.
 - (G) i = subscript denoting a specific VOC component.
 - (H) n = total number of VOC components.
- (2) Weighted average volatility shall be calculated as follows:

$$WAV = \left(\sum_{i=1}^n \frac{(VP_i)(MVOC_i)}{(MWVOC_i)} \right) \div \left(\sum_{i=1}^n \frac{(MVOC_i)}{(MWVOC_i)} \right)$$

- (3) For purposes of determining applicability, calculated applicability flow rate values shall be determined as follows:

(A) Process vents with a WAV that is less than or equal to seventy-five (75) mmHg at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit), shall use the following equation:

$$FR = [0.07 (UTAME)] - 1,821$$

(B) Process vents with a WAV that is greater than seventy-five (75) mmHg, but less than or equal to one hundred fifty (150) mmHg at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit), shall use the following equation:

$$FR = [0.031 (UTAME)] - 494$$

(C) Process vents with a WAV that is greater than one hundred fifty (150) mmHg at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit), shall use the following equation:

$$FR = [0.013 (UTAME)] - 301$$

(f) For purposes of subsection (a), an emission unit shall be considered regulated by a document, section, or subpart if it is subject to the limits of that rule, section, or subpart. An emission unit is not considered regulated by a rule, section, or subpart if it is not subject to the limits of that rule, section, or subpart. For example, if the emission unit is covered by an exemption in the rule, section, or subpart, or the applicability criteria of the rule, section, or subpart are not met, then the source is not subject to rule, section, or subpart. An emission unit is also not considered regulated if there is no rule contained in [326 IAC 8](#) regulating the source category.

SECTION 2. Definitions. The following definitions apply throughout this document:

- (1) "Aggregate" means the summation of all process vents containing VOC within a process.
- (2) "Batch cycle" means a manufacturing event of an intermediate or product from start to finish in a batch process train.
- (3) "Batch operation" means a noncontinuous operation in which a discrete quantity or batch of feed is charged into a unit operation within a batch process train and processed at one (1) time. Batch operation includes noncontinuous operations in which the equipment is fed intermittently or discontinuously. Addition of raw material and withdrawal of product do not occur simultaneously in a batch operation. After each batch operation, the equipment is generally emptied before a fresh batch is started.
- (4) "Batch process train" means the collection of equipment, such as:
 - (A) reactors;
 - (B) filters;
 - (C) dryers;
 - (D) distillation columns;
 - (E) extractors;
 - (F) crystallizers;
 - (G) blend tanks;
 - (H) neutralizer tanks;
 - (I) digesters;
 - (J) surge tanks; and
 - (K) product separators;

configured to produce a specific product or intermediate by a batch operation. A batch process train terminates at the point of storage or product handling of the product or intermediate being produced

in the batch process train. Irrespective of the product being produced, a batch process train that is independent of other processes shall be considered a single batch process train for purposes of this document.

- (5) "Boiler" means any enclosed combustion device that extracts useful energy in the form of steam.
- (6) "Btu" means British thermal unit.
- (7) "Continuous recorder" means a data recording device that either records:
 - (A) an instantaneous data value at least once every fifteen (15) minutes; or
 - (B) fifteen (15) minute or more frequent block average values.
- (8) "Control device" means any device or combination of devices designed to recover or destroy VOC vapors received from the process vents. A recovery device that is a required part of the process, for example, but not limited to, condensers operating under reflux conditions, is not a control device.
- (9) "Emission event" means a discrete period of venting that is associated with a unit operation. For example, a displacement of vapor resulting from the charging of a unit operation with VOC will result in a discrete emission event that will last through the duration of the charge and will have an average flow rate equal to the rate of the charge. The expulsion of expanded unit operation vapor space when the vessel is heated is also an emission event. Both of these examples of emission events and others may occur in the same unit operation during the course of the batch cycle. If the flow rate measurement for any discrete period of venting is zero (0), then the event is not an emission event for purposes of this document.
- (10) "Flame zone" means the portion of the combustion chamber in a boiler occupied by the flame envelope.
- (11) "Incinerator" means any enclosed combustion device that is used for destroying organic compounds. Auxiliary fuel may be used to heat waste gas to combustion temperatures. Any energy recovery section present is not physically formed into one (1) section; rather, the energy recovery system is a separate section following the combustion section and the two are joined by ducting or connections that carry fuel gas.
- (12) "MmHg" means millimeters of mercury.
- (13) "Permit" means a permit issued by the commissioner under [326 IAC 2](#).
- (14) "Ppmv" means parts per million by volume.
- (15) "Process vent" means a vent gas stream that is discharged from a unit operation or multiple unit operations within the same batch process train that are manifolded together into a common header. A process vent begins at the inlet to the control device prior to mixing with vent gas streams from other process trains or unrelated operations or, in the absence of a control device, at the point of discharge to the atmosphere. The term does not include exhaust streams from exhaust hood and building ventilation fans that are used to provide ventilation for workers and not to collect and discharge emissions from specific unit operations. Process vents exclude the following:
 - (A) Relief valve discharges.
 - (B) Leaks from equipment.
 - (C) Vents from storage tanks.
 - (D) Vents from transfer or loading operations.
 - (E) Vents from wastewater.
- (16) "Recovery device" means an individual unit of equipment, such as:
 - (A) an absorber;
 - (B) a carbon adsorber; or
 - (C) a condenser;capable of and used for the purpose of recovering chemicals for use, reuse, or sale.
- (17) "Recovery system" means an individual recovery device or series of such devices applied to the same vent stream.
- (18) "Scfm" means standard cubic feet per minute.
- (19) "Standard industrial classification code" or "SIC code" means a series of four (4) digit codes devised by the Office of Management and Budget (OMB) of the federal government to classify establishments according to the type of economic activity in which they are engaged.
- (20) "Unit operation" means one (1) or more pieces of process equipment used to make a single change to the physical or chemical characteristics of one (1) or more process streams. Equipment used for these purposes includes, but is not limited to, the following:
 - (A) Reactors.
 - (B) Filters.
 - (C) Dryers.
 - (D) Distillation columns.
 - (E) Extractors.
 - (F) Crystallizers.

- (G) Blend tanks.
- (H) Neutralizer tanks.
- (I) Digesters.
- (J) Surge tanks.
- (K) Product separators.

SECTION 3. Control requirements for VOC emissions from process vents. The control requirements set forth in this document shall apply to process vents of batch process trains and unit operations within batch process trains (batch operations) as follows:

- (1) The owner or operator of a unit operation with an average flow rate, as determined in accordance with SECTION 4(b) of this document, below the flow rate value calculated by the applicability equations contained in SECTION 1(e) of this document, shall reduce uncontrolled VOC emissions from such unit operation by an overall efficiency, on average, of at least ninety percent (90%), or to twenty (20) ppmv, per batch cycle.
- (2) The owner or operator of a batch process train with an average flow rate, as determined in accordance with SECTION 4(b)(2) of this document, below the flow rate value calculated by the applicability equations contained in SECTION 1(e) of this document, shall reduce uncontrolled VOC emissions from such batch process train by an overall efficiency, on average, of at least ninety percent (90%), or to twenty (20) ppmv, per batch cycle.
- (3) If a boiler or process heater is used to comply with subdivision (1) or (2), the vent stream shall be introduced into the flame zone of the boiler or process heater.
- (4) If a flare is used to comply with subdivision (1) or (2), the flare shall comply with the requirements of 40 CFR 60.18*.
- (5) If a process, not subject to this document, vents an emergency relief discharge into a common flare header of this flare, the requirements of 40 CFR 60.18* shall not apply during the emergency relief discharge.

*These documents are incorporated by reference. Copies may be obtained from the Government Printing Office, 732 North Capitol Street NW, Washington D.C. or are available for review and copying at the Indiana Department of Environmental Management, Office of Legal Counsel, Indiana Government Center North, Thirteenth Floor, 100 North Senate Avenue, Indianapolis, Indiana 46204.

SECTION 4. Determination of uncontrolled total annual mass emissions and actual weighted average flow rate values for a batch process train or unit operation. (a) Uncontrolled total annual mass emissions shall be determined by the following methods:

- (1) Direct process vent emissions measurements taken prior to any release to the atmosphere, following any recovery device, prior to mixing with vents from other process trains or unrelated operations, and prior to any control device, provided the measurements conform with the requirements of measuring the mass flow rate of VOC incoming to the control device as set forth in SECTIONS [SECTION] 5(f)(2), 5(f)(3)(A)(i), and 5(f)(3)(A)(ii) of this document.
- (2) Engineering estimates of the uncontrolled VOC emissions from a process vent or process vents, in the aggregate, within a batch process train, using either the potential or permitted number of batch cycles per year or total production as represented in the permit for the batch process train as follows:
 - (A) Engineering estimates of the uncontrolled VOC emissions shall be based upon accepted chemical engineering principles, measurable process parameters, or physical or chemical laws and their properties. Examples of methods include, but are not limited to, the following:
 - (i) Use of material balances based on process stoichiometry to estimate maximum VOC concentrations.
 - (ii) Estimation of maximum flow rate based on physical equipment design, such as pump or blower capacities.
 - (iii) Estimation of VOC concentrations based on saturation conditions.
 - (B) All data, assumptions, and procedures used in any engineering estimate shall be documented.

(b) Average flow rate shall be determined by any of the following methods:

- (1) Direct process vent flow rate measurements taken prior to any release to the atmosphere, following any recovery device, prior to mixing with vents from other process trains or unrelated operations, and prior to any control device, provided the measurements conform with the requirements of measuring incoming volumetric flow rate set forth in SECTION 5(f)(2) of this document.
- (2) Average flow rate for a unit operation having multiple emission events or batch process trains

shall be the weighted average flow rate, calculated as follows:

$$WAF = \frac{\sum_{i=1}^n (AFR_i)(ADE_i)}{\sum_{i=1}^n (ADE_i)}$$

Where: WAF = actual weighted average flow rate for a unit operation or batch process train.

AFR_i = average flow rate of emission event i.

ADE_i = annual duration of emission event i.

i = subscript denoting a specific emission event.

n = number of emission events.

(3) Engineering estimates calculated in accordance with the requirements in subsection (a)(2).

(c) For purposes of determining the average flow rate for steam vacuuming systems, the steam flow shall be included in the average flow rate calculation.

SECTION 5. Compliance testing requirements. (a) Upon the commissioner's request, the owner or operator of a batch process train or unit operation within a batch process train shall conduct testing to demonstrate compliance with SECTION 3 this document. The owner or operator shall, at its own expense, conduct the tests in accordance with the applicable test methods and procedures specified in subsections (d), (e), and (f).

(b) Notwithstanding subsection (a), flares and process boilers used to comply with the control requirements of SECTION 3 of this document shall be exempt from compliance testing requirements.

(c) When a flare is used to comply with the control requirements of SECTION 3 of this document, the flare shall comply with the requirements of 40 CFR 60.18*.

(d) The owner or operator of a batch process train or unit operation within a batch process train that is exempt from the control requirements of SECTION 3 of this document due to:

(1) an average flow rate that is equal to or above the calculated applicability flow rate; or

(2) a VOC concentration of less than or equal to five hundred (500) ppmv (unit operation);

shall demonstrate, upon the commissioner's request, the absence of oversized gas moving equipment in any manifold. Gas moving equipment shall be considered oversized if it exceeds the maximum requirements of the exhaust flow rate by more than thirty percent (30%).

(e) For the purpose of demonstrating compliance with the control requirements in SECTION 3 of this document, the batch process train or unit operation shall be run at representative operating conditions and flow rates during any compliance test.

(f) The following methods in 40 CFR 60, Appendix A* shall be used to demonstrate compliance with the reduction efficiency requirement set forth in SECTION 3 of this document:

(1) U.S. EPA Method 1 or 1A, as appropriate, for selection of the sampling sites if the flow measuring device is not a rotameter. The control device inlet sampling site for determination of vent stream VOC composition reduction efficiency shall be prior to the control device and after the control device.

(2) U.S. EPA Method 2, 2A, 2B, 2C, or 2D, as appropriate, for determination of gas stream volumetric flow rate flow measurements, which shall be taken continuously. No traverse is necessary when the flow measuring device is an ultrasonic probe.

(3) U.S. EPA Method 25A or U.S. EPA Method 18, if applicable, to determine the concentration of VOC in the control device inlet and outlet as follows:

(A) The sampling time for each run shall be as follows:

(i) For batch cycles less than eight (8) hours in length, readings shall be taken continuously over the entire length of the batch cycle with a maximum of fifteen (15) minute intervals between measurements if using U.S. EPA Method 25A. If using U.S. EPA Method 18, readings shall be

taken continuously with a maximum of fifteen (15) minute intervals between measurements throughout the batch cycle unless it becomes necessary to change the impinger train, in which case a thirty (30) minute interval shall not be exceeded.

(ii) For batch cycles of eight (8) hours and greater in length, the owner or operator may either test in accordance with the test procedures defined in item (i) or the owner or operator may elect to perform tests, pursuant to either U.S. EPA Method 25A or U.S. EPA Method 18, only during those portions of each emission event that define the emission profile of each emission event occurring within the batch cycle. For each emission event of less than four (4) hours in duration, the owner or operator shall test continuously over the entire emission event as set forth in item (i). For each emission event of greater than four (4) hours in duration, the owner or operator shall elect either to perform a minimum of three (3) one (1) hour test runs during the emission event or shall test continuously over the entire emission event within each unit operation in the batch process train. To demonstrate that the portion of the emission event to be tested defines the emission profile for the emission event, the owner or operator electing to rely on this option shall develop an emission profile for the entire emission event. The emission profile shall be based upon either process knowledge or test data collected. Examples of information that could constitute process knowledge include, but are not limited to, calculations based on material balances and process stoichiometry. Previous test results may be used provided the results are still relevant to the current process vent stream conditions.

(B) The mass emission rate from the process vent or inlet to the control device shall be determined by combining concentration and flow rate measurements taken simultaneously at sampling sites selected in accordance with subdivision (1) throughout the batch cycle.

(C) The mass emission rate from the control device outlet shall be obtained by combining concentration and flow rate measurements taken simultaneously at sampling sites selected in accordance with subdivision (1) throughout the batch cycle.

(D) The efficiency of the control device shall be determined by integrating the mass emission rates obtained in clauses (B) and (C) over the time of the batch cycle and dividing the difference in inlet and outlet mass flow totals by the inlet mass flow total.

(g) The owner or operator of a batch process train or unit operation may propose an alternative test method or procedures to demonstrate compliance with the control requirements set forth in SECTION 3 of this document. The method or procedures shall be:

- (1) approved by the commissioner and U.S. EPA in writing; and
- (2) included as federally enforceable permit conditions.

(h) In the absence of a request by the commissioner to conduct compliance testing in accordance with provisions of this document, the owner or operator may demonstrate compliance by the use of engineering estimates or process stoichiometry.

(i) During the compliance test conducted to demonstrate compliance with the control requirements of SECTION 3 of this document, the owner or operator shall establish the operating limits (operating parameter values) for the monitoring devices required under SECTION 6 of this document.

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SECTION 6. Monitoring requirements. (a) Every owner or operator using an incinerator to comply with SECTION 3 of this document shall install, calibrate, maintain, and operate, according to manufacturer's specifications, temperature monitoring devices with an accuracy of plus or minus one percent (1%) of the temperature being measured expressed in degrees Celsius or plus or minus one and eight-tenths percent (1.8%) of the temperature being measured expressed in degrees Fahrenheit, each equipped with a continuous recorder as follows:

- (1) Where a catalytic incinerator is used, temperature monitoring devices shall be installed in the gas stream immediately before and after the catalyst bed.
- (2) Where an incinerator other than a catalytic incinerator is used, a temperature monitoring device shall be installed in the combustion chamber.

(b) The owner or operator using a flare to comply with SECTION 3 of this document shall install, calibrate, maintain, and operate, according to manufacturer's specifications, a heat sensing device, such

as an ultraviolet beam sensor or thermocouple, at the pilot light to indicate continuous presence of a flame.

(c) Every owner or operator using a scrubber to comply with SECTION 3 of this document shall install, calibrate, maintain, and operate, according to manufacturer's specifications:

- (1) a temperature monitoring device for scrubbant liquid having an accuracy of plus or minus one percent (1%) of the temperature being monitored expressed in degrees Celsius or plus or minus one and eight-tenths percent (1.8%) of the temperature being measured expressed in degrees Fahrenheit and a specific gravity device for scrubbant liquid, each equipped with a continuous recorder; or
- (2) a VOC monitoring device used to indicate the concentration of VOC exiting the control device based on a detection principle, such as infrared, photoionization, or thermal conductivity, equipped with a continuous recorder.

(d) Every owner or operator using a condenser to comply with SECTION 3 of this document shall install, calibrate, maintain, and operate, according to manufacturer's specifications:

- (1) a condenser exit temperature monitoring device equipped with a continuous recorder and having an accuracy of plus or minus one percent (1%) of the temperature being monitored expressed in degrees Celsius or plus or minus one and eight-tenths percent (1.8%) of the temperature being measured expressed in degrees Fahrenheit, equipped with a continuous recorder; or
- (2) a VOC monitoring device used to indicate the concentration of VOC, such as infrared, photoionization, or thermal conductivity, each equipped with a continuous recorder.

(e) Every owner or operator using a carbon adsorber to comply with SECTION 3 of this document shall install, calibrate, maintain, and operate, according to the manufacturer's specifications:

- (1) an integrating regeneration steam flow monitoring device having an accuracy of plus or minus ten percent (10%), and a carbon bed temperature monitoring device having an accuracy of plus or minus one percent (1%) of the temperature being monitored expressed in degrees Celsius or plus or minus one and eight-tenths percent (1.8%) of the temperature being measured expressed in degrees Fahrenheit, both equipped with a continuous recorder; or
- (2) a VOC monitoring device used to indicate the concentration level of VOC exiting the device based on a detection principle, such as infrared, photoionization, or thermal conductivity, equipped with a continuous recorder.

(f) Every owner or operator using a boiler or process heater with a design heat input capacity less than one hundred fifty million (150,000,000) Btu per hour that is to comply with SECTION 3 of this document shall install, calibrate, maintain, and operate, according to the manufacturer's specifications, a temperature monitoring device in the firebox with an accuracy of plus or minus one percent (1%) of the temperature being measured expressed in degrees Celsius or plus or minus one and eight-tenths percent (1.8%) of the temperature being measured expressed in degrees Fahrenheit, equipped with a continuous recorder. Any boiler or process heater in which all process vent streams are introduced with primary fuel is exempt from this requirement.

(g) Every owner or operator of a process vent shall be permitted to monitor by an alternative method or may monitor parameters other than those listed in subsections (a) through (f), if approved by the commissioner and U.S. EPA in writing. The alternative method or parameters shall be contained in a permit pertaining to the process vent as federally enforceable permit conditions.

SECTION 7. Record keeping. (a) Every owner or operator of a unit operation or batch process train that is exempt from the control requirements in SECTION 1(c)(2)(A) or 1(c)(2)(B) of this document shall keep records of the uncontrolled total annual mass emissions for such unit operation or batch process train, as applicable, and documentation verifying these values or measurements. The documentation shall include the engineering calculations, any measurements made in accordance with SECTION 5 of this document, and the potential or permitted number of batch cycles per year or, in the alternative, total production as represented in the permit pertaining to the unit operation or batch process train.

(b) Every owner or operator of a unit operation or batch process train that is exempt from control requirements of SECTION 1(c)(2) of this document shall keep the following records:

- (1) The uncontrolled total annual mass emissions and documentation verifying these values or measurements. The documentation shall include any engineering calculations, any measurements made in accordance with SECTION 5 of this document, and the potential or permitted number of batch cycles per year or, in the alternative, total production as represented in the permit pertaining to

the unit operation or batch process train.

(2) The average flow rate in scfm and documentation verifying this value.

(3) The calculated weighted average volatility and documentation verifying this value.

(4) The calculated applicability flow rate value from SECTION 1(e)(3) of this document.

(c) Every owner or operator of a batch process train or unit operation subject to the control requirements of SECTION 3 of this document shall keep records of the following parameters required to be monitored under SECTION 6 of this document:

(1) If using a thermal or catalytic incinerator to comply with SECTION 3 of this document, records indicating the average combustion chamber temperature of the incinerator (or the average temperature upstream and downstream of the catalyst bed for a catalytic incinerator) measured continuously and averaged over the same time period as the compliance test that demonstrated compliance.

(2) If using a flare, either steam-assisted, air-assisted, or nonassisted, to comply with SECTION 3 of this document, continuous records of the flare pilot flame monitoring and records of all periods of operations during which the pilot flame is absent.

(3) If using any of the following as a control device, the following records:

(A) Where a scrubber is used, the exit specific gravity (or alternative parameter equivalent in ability to measure the degree of absorbing liquid saturation, if approved by the commissioner) and the average exit temperature of the absorbing liquid, measured continuously and averaged over the same time period as the compliance test that demonstrated compliance (both measured while the vent stream is routed normally).

(B) Where a condenser is used, the average exit (product side) temperature measured continuously and averaged over the same time period as the compliance test that demonstrated compliance while the vent stream is routed normally.

(C) Where a carbon adsorber is used, the total steam mass flow measured continuously and averaged over the same time period as the compliance test that demonstrated compliance (full carbon bed cycle), temperature of the carbon bed after regeneration (and within fifteen (15) minutes after completion of any cooling cycle or cycles), and duration of the carbon bed steaming cycle (all measured while the vent stream is routed normally).

(D) As an alternative to clause (A), (B), or (C), at a minimum, records indicating the concentration level or reading indicated by the VOC monitoring device at the outlet of the scrubber, condenser, or carbon adsorber, measured continuously and averaged over the same time period as the compliance test that demonstrated compliance (while the vent stream is routed normally).

(d) Every owner or operator of a unit operation claiming a vent stream concentration exemption level, as set forth in SECTION 1(d)(1) of this document, shall:

(1) maintain records to indicate the vent stream concentration is less than or equal to five hundred (500) ppmv; and

(2) notify the commissioner in writing if the vent stream concentration at any time equals or exceeds five hundred (500) ppmv, within sixty (60) days after the event.

The notification shall include a copy of all records of the event.

(e) An owner or operator of a batch process train or unit operation subject to the control requirements of SECTION 3 of this document may maintain alternative records other than those listed in SECTION 1 of this document. Any alternative record keeping shall be:

(1) approved by the commissioner and U.S. EPA in writing; and

(2) contained in the permit pertaining to the batch process train or unit operation as federally enforceable permit conditions.

(f) The owner or operator of a unit operation or batch process train that is exempt from the control requirements of SECTION 3 of this document shall notify the commissioner in writing if the uncontrolled total annual mass emissions from such unit operation or batch process train exceed the threshold in SECTION 1(c)(2)(A) or 1(c)(2)(B) of this document, respectively, within sixty (60) days after the event occurs. The notification shall include a copy of all records of the event.

(g) Every owner or operator of a batch process train or unit operation required to keep records under this document shall:

(1) maintain the records at the source for a minimum period of five (5) years; and

(2) make the records available to the commissioner upon request.

SECTION 8. Reporting. Reporting requirements are as follows:

(1) Initial compliance status report. Each owner or operator of a batch process train or unit operation subject to this document shall submit an initial compliance status report within sixty (60) calendar days after the compliance dates specified in SECTION 9 of this document as follows:

(A) The initial compliance status report shall include the following:

- (i) The results of exemption.**
- (ii) Process vent determinations.**
- (iii) Compliance tests.**
- (iv) Values of monitored parameters established during compliance tests.**
- (v) Any other information used to demonstrate compliance and recorded under SECTION 7 of this document.**

(B) For compliance tests and process vent determinations based on measurements, the initial compliance status report shall include one (1) complete test report for each test method used for a particular kind of process vent. For additional tests and measurements performed for the same kind of process vent using the same test method, the test results or measurement results shall be submitted, but a complete test report is not required.

(C) A complete test report shall include the following:

- (i) A brief process description.**
- (ii) A sampling site description.**
- (iii) A description of sampling and analysis procedures and any modifications to standard procedures.**
- (iv) Quality assurance procedures.**
- (v) A record of operating conditions during the test.**
- (vi) A record of preparation of standards.**
- (vii) A record of calibrations.**
- (viii) Raw data sheets for field sampling.**
- (ix) Raw data sheets for field and laboratory analyses.**
- (x) Documentation of calculations.**
- (xi) Any other information required by the test method.**

(D) For each monitored parameter for which a range is required to be established under SECTION 5(i) of this document, the compliance status report shall include the following information:

- (i) The specific range of the monitored parameter or parameters for each control device.**
- (ii) The rationale for the specific range for each parameter for each control device, including the following:**
 - (AA) Any data and calculations used to develop the range.**
 - (BB) A description of why the range indicates proper operation of the control device or final recovery device.**

(2) Semiannual compliance status reports. The owner or operator of a batch process train or unit operation subject to this document shall submit semiannual compliance status reports containing the information in clauses (A) and (B). The semiannual compliance status report shall be submitted no later than sixty (60) calendar days after the end of each six (6) month period to the department. The first report shall be submitted no later than eight (8) months after the date the initial compliance status report is due and shall cover the six (6) month period beginning on the date the initial compliance status report is due as follows:

(A) Semiannual reports on parameter monitoring for controlled process vents. For a process vent equipped with a control device to meet the requirement of SECTION 3 of this document, the semiannual compliance status reports shall include the following recorded information:

- (i) Reports of monitored parameters for all operating days when the average values recorded under SECTION 7(c) of this document were outside the ranges established in the initial compliance status report or permit issued by the commissioner.**
- (ii) Reports of the times and durations of all periods recorded under SECTION 9(3) of this document when the monitoring device is not working or monitoring data is not collected during process operation generating the process vent stream or during operation of the control or recovery device.**
- (iii) Reports of the times and durations of all periods recorded under SECTION 7(c)(2) of this document in which the pilot flame is absent.**
- (iv) Reports on monitoring devices and parameters approved by the commissioner under SECTION 7(e) of this document.**

(B) Semiannual reports on subsequent compliance tests for controlled process vents and subsequent process vent determination tests. If any subsequent compliance tests or subsequent process vent determination tests are conducted during the semiannual reporting period after the

initial compliance status report has been submitted, the semiannual compliance status report shall include the data recorded under SECTION 7 of this document.

SECTION 9. Compliance dates. Except where otherwise specified in this document, the compliance dates for any batch process train that is subject to this document are as follows:

(1) If installation commenced before the effective date of this document, the compliance date of the batch process train is:

(A) April 1, 2011; or

(B) the date the source becomes subject to this document;
whichever is later.

(2) If installation commenced on or after the effective date on this document, the compliance date of the batch process train is the date of initial startup of the batch process train.

(3) If a source reduces its potential to emit under SECTION 1(b) of this document, the date on which the source subsequently meets the applicability criteria of SECTION 1(a) of this document is the date the source becomes subject to this document.

(4) If a batch process train or unit operation is exempted under SECTION 1(c)(2) of this document or is not required to reduce uncontrolled VOC emissions under SECTION 3(1) or 3(2) of this document and is subsequently equipped with a control device to meet the VOC reduction requirements of SECTION 3(1) or 3(2) of this document, the compliance date of the batch process train or unit operation is the date of first startup of the installed control device. Until the date of first startup of the installed control device, the batch process train or unit operation shall continue to meet either the exemption level or the criteria pertaining to applicability equations.

(5) For any control device that is used to comply with SECTION 3 of this document, the owner or operator shall demonstrate compliance by testing the control device in accordance with SECTION 5 of this document within ninety (90) days after the compliance date.

(6) Additional testing of the control device or testing of the process vents of a batch process train or unit operation in accordance with SECTION 5 of this document may be required by the commissioner to ensure continued compliance with SECTION 3 of this document.

SECTION 10. A variance request from the requirements of this document shall be made in accordance with [IC 13-14-8-8](#).

SECTION 11. This document expires on the effective date of LSA [Document] #09-222 or ninety (90) days after filing with the publisher, whichever takes place first.

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